was implemented to decrease urinary calcium concentration and thus the formation of calcium carbonate uroliths. Calcium-rich feeds, such as alfalfa hay, were removed from the ration and replaced with increasing quantities of grain and grass hay. These feeds may also help to reduce the dietary cation-anion balance and decrease urinary pH (2). The growth of calcium carbonate crystals is promoted in alkaline environments, so decreasing urinary pH may inhibit crystallization (9). Protocols involving daily oral administration of urine acidifiers, such as ammonium sulfate, have been shown to be effective in reducing urinary pH and may help avert recurrent urolithiasis in horses (9). Due to the gelding's size and resistance to oral dosing, directed treatments with urinary acidifiers were not pursued in this case.

Urolith formation may also be prevented by decreasing the time that urine remains in the bladder (2,9). In average sized horses, the addition of 50–75 g of salt to the daily ration may increase fluid intake and promote diuresis (2). Unlike humans, increasing the salt content in equine diets has been shown not to increase urinary calcium excretion and, therefore, should not increase the risk of urolith formation (10). Table salt was added to the gelding's diet at 100 g, PO, q24h, mixed with grain. The amount of salt was increased above that reported in the literature to account for the gelding's large size (approximately 750 kg).

This case stresses the importance of examining the entire urinary tract in horses diagnosed with urolithiasis or being presented for urethral obstruction. If nephrolithiasis is identified, early initiation of medical therapy may delay the onset of renal failure. This is especially important for horses where surgical intervention is not an option due to logistical or economic limitations.

Acknowledgments

The author thanks Dr. Katharina Lohmann, Dr. John Pharr, and Dr. Alisha Janzen for their assistance in preparing this manuscript. CVJ

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Book Reviews
Comptes rendus de livres

Dr. Frank W. Schofield: Veterinarian Extraordinaire

Maplesden DC. LomaLand Books, Santa Fe, New Mexico, USA. 2005. SBN 1-930371-08-X.

In this short book, the author provides a synopsis of the life of a colorful and influential pioneer of veterinary medicine in Canada. Dr. Frank Schofield was typical of many young men of the British Empire in the early 1900's. Schofield was from a relatively poor middle-class family, and after a somewhat difficult childhood, he saw Canada as a land of opportunity, so at the age of 17 he left his family in England and emigrated to Canada. He worked on a farm for a short time to save money and then enrolled at the Ontario Veterinary College (OVC). The hardships he endured as a student were intense, and force the reader to reflect on the comparative luxury that most modern veterinary students enjoy in Canada.

Schofield overcame poverty and debilitating illness during his studies at the OVC and excelled scholastically, though his sickness left him partially disabled for life. He then joined the OVC faculty as a veterinary researcher and teacher. As a professor of bacteriology and pathology at the OVC, Frank Schofield was known as a brilliant and insightful researcher, and as a spellbinding orator and teacher. However, he also had the reputation of being intimidating and opinionated, and he was feared and disliked by some students and colleagues. The long list of Frank Schofield's publications provided as an appendix to the book underscores his pioneering work in determining the etiology and pathology of many common syndromes and diseases. His work involved investigations of nutritional conditions and many bacterial and viral infections including clostridial diseases, salmonellosis, and bovine mastitis. An appendix in the book contains an excerpt from the first "Schofield Memorial Lecture" at the OVC, and outlines Schofield's contribution to the elucidation of the etiology and pathology of mouldy sweet clover poisoning. The description of some of the experiments that he conducted and the challenges he faced in pursuing this research is fascinating.

Schofield's dedication to service and sacrifice on behalf of veterinary research and education extended to his personal faith and service of God through service to humanity. He was known locally for his kindness and generosity, but few colleagues know

of his long-term contributions to development in Korea. Early in his career, after working at OVC for several years, he went to Korea to teach bacteriology at a medical college in Seoul. While there, he traveled throughout the country as a Christian missionary, preaching the Gospel and encouraging the Koreans in their struggle for independence from Japanese rule. Though he returned to Canada and back to OVC after only 4 years, Frank Schofield continued throughout his life to support Korean orphanages, the church, and the efforts of Koreans to gain national independence. After his retirement, he returned to Korea to continue this work, and late in his life he was recognized by the South Korean government with the country's highest civilian honor.

This book is light reading and will be enjoyed by many who are interested in either the history of the veterinary profession in Canada, or the roles veterinarians play in developing nations. Frank Schofield's influence has been felt directly by many who were his students during the decades he was a professor at the OVC. To this day, many Canadian veterinarians have probably been indirectly influenced by him through professors who were taught and mentored by him decades ago. This book makes an important contribution toward helping Canadian veterinarians remember our heritage.

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BSAVA Manual of Canine and Feline Nephrology and Urology, 2nd ed.

Elliott J, Grauer G, eds. British Small Animal Veterinary Association, Gloucester, England, UK. 2007. 298 pp. ISBN 10 0905214-93-5.

The 2nd edition of the *BSAVA manual of Canine and Feline Nephrology and Urology,* is an excellent manual on the pathophysiology, diagnosis, and treatment of disorders of the urinary system of dogs and cats. This edition has been published 10 years after the 1st edition, and in addition to bringing all the material up-to-date, this edition introduces chapters on staging chronic kidney disease, measurement of blood pressure, cystoscopy, lithotripsy, dialysis, and glomerulonephritis. These additions have been made because of advances in the past 10 y that have highlighted the recognition of the importance of proteinuria in the progression of chronic renal failure. During this time, blood pressure monitoring has become more available in veterinary practices, and while cystoscopy, lithotripsy, and dialysis are not available at most veterinary practices, these techniques have been refined at referral centers. Knowledge of these techniques is valuable to general practitioners in order to know what options are available, and be able to select appropriate cases for referral.

The chapters in the book cover the important aspects of nephrology and urology, including clinical signs, diagnostic techniques, advanced therapeutic techniques, and management of specific conditions. The chapters on clinical signs include dysuria, hematuria, polyuria/polydipsia, incontinence, and urine retention. Diagnostic techniques chapters include renal palpation, urinalysis, assessment of renal function, diagnostic imaging, renal biopsy, blood pressure measurement, and cystoscopy. There are 2 chapters on advanced therapeutic techniques: lithotripsy, and peritoneal dialysis and hemodialysis. The chapters covering management of specific conditions include acute renal failure, chronic renal failure, glomerulonephritis, prostatic diseases, urolithiasis, nonobstructive idiopathic/interstitial cystitis in cats, and urinary tract infections.

The text is arranged in prose format with chapters authored by 26 international experts in the field of nephrology and urology. The many headings and subheadings in each chapter makes it easy to find particular topics rapidly. The index is only 8 pages long, but it is comprehensive enough that it is effective and easy to use. The book is well illustrated with almost all the photographs and figures appearing in color. Even most of the drawings are in color. In fact, only radiographic images, ultrasonographic images, and the occasional line drawing are in black and white. In the chapter on urinalysis, the many color photographs of urine sediment are particularly helpful in differentiating crystals, casts, cells, and various organisms. There are many tables in the text, including flow charts, tables of differential diagnoses, and tables of drugs with mechanisms of action and side effects compared. These tables are set off in pale blue to make them stand out easily from the rest of the text.

The strengths of this book include its short prose chapters that provide a good overview of the topics covered. It provides an excellent update of advances in the field of small animal nephrology and urology in the last 10 years, without presenting intimidating volumes of detail. The color photographs, figures, and tables are plentiful and helpful in clearly illustrating the points presented in the text. The only drawback to this book is that its format may not be what is sought by all readers. This book is not intended as an exhaustive textbook on nephrology and urology, nor is it intended to be a quick reference manual with text in bulleted form. Instead, it is a comprehensive manual in prose format designed for fairly rapid retrieval of information, while still providing a good understanding of disease processes, and diagnostic and therapeutic options. It is not intended to provide a detailed review of the research literature, although the facts presented and key studies are well referenced for those readers who choose to research the subject in more depth. This book is particularly helpful for general practitioners and veterinary students seeking a good overview of the current state of knowledge in the field of small animal nephrology and urology. The chapters are short enough that they are easily absorbed at one sitting, and detailed enough that the main points on the subject are adequately covered.

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